

WHAT IS CLAIMED IS:

1. An absorptive high temperature desorber having a mechanically narrow width of a combustion area, comprising:

a plurality of combustion chambers (57-1, 57-2) receiving a mixing gas  
5 consisting of fuel and air for forming flame;

a plurality of distribution chambers (54-1, 54-2) supplying the mixing gas correspondingly adjacent to the respective combustion chamber;

combustion plates (55-1, 55-2) equipped between the respective combustion chamber and the respective distribution chamber, the combustion  
10 plates igniting the mixing gas independently flowing from the respective distribution chamber to the respective combustion chamber for forming flame;

a diluted solution input section (56B) receiving a diluted solution such as lithium bromide from an outside;

a group of liquid duct having a predetermined diameter, the group of  
15 liquid duct being equipped in the perpendicular direction within the respective combustion chamber, the intermediate solution flowing therein;

a duct wall (58-3) forming a wall of the combustion chamber, the intermediate solution flowing on the duct wall;

a group of liquid ducts (58-1, 58-2) equipped in the perpendicular  
20 direction within the combustion chambers (57-1, 57-2), the intermediate solution flowing therein;

a vapor discharging section (59) discharging the vapor evaporated from the diluted solution into the outside, the intermediate solution flowing within the group of liquid duct and on the duct wall being heated by the flame;

25 and

an intermediate solution discharging section (56A) discharging into the intermediate solution generated by evaporating the vapor from the diluted solution the outside.

5           2.       The absorptive high temperature desorber according to claim 1, wherein the vapor discharging section (59) further includes an eliminator (59-1) having an angled shape for preventing the intermediate solution from erupting and discharging toward the outside.

10           3.       The absorptive high temperature desorber according to claim 1, wherein the plurality of distribution chambers further include a first branch pipe (53-1) equipped in the outside, the first branch pipe being connected with a mixing gas chamber generating the mixing gas; and a plurality of second branch pipes (53-2, 53-3) connected to the other end of the first branch pipe  
15       connected to the mixing gas chamber.

          4.       The absorptive high temperature desorber according to claim 3, wherein the second branch pipe includes a plurality of first valves for independently controlling an amount of the mixing gas flowing from the mixing  
20       gas chamber to the distribution chamber.

          5.       The absorptive high temperature desorber according to claim 4, wherein the first branch pipe further includes a second valve for controlling an amount of the mixing gas flowing from the mixing gas chamber to the second  
25       branch pipe.

6. The absorptive high temperature desorber according to claim 1, wherein the respective combustion plate is overlapped plurally.

5 7. An absorption chiller-heater comprising:

a diluted solution generating section (20) connected to the outside load for exchanging heat with the outside load, the diluted solution generating section generating the diluted solution by containing moisture in an diluted solution such as lithium bromide;

10 an intermediate solution generating section (60) discharging vapor evaporated from the diluted solution and the intermediate solution having a higher concentration than that of the diluted solution by receiving the diluted solution discharged from the diluted solution generating section (20) and evaporating a moisture contained in the diluted solution; and

15 a concentrated solution generating section (10) discharging the concentrated solution having a higher concentration than that of the intermediate solution and water generated by condensing water vapor transferring heat to the concentrated solution to the diluted solution generating section (20) by receiving the intermediate solution and water vapor and  
20 evaporating a moisture contained in the intermediate solution by a thermal energy contained in the water vapor of high temperature;

wherein, the intermediate solution generating section comprising:

a plurality of combustion chambers (57-1, 57-2) receiving a  
25 mixing gas consisting of fuel and air for forming flame;

a plurality of distribution chambers (54-1, 54-2) supplying the mixing gas correspondingly adjacent to the respective combustion chamber;

5 combustion plates (55-1, 55-2) equipped between the respective combustion chamber and the respective distribution chamber, the combustion plates igniting the mixing gas independently flowing from the respective distribution chamber to the respective combustion chamber for forming flame;

10 a diluted solution input section 56B receiving a diluted solution discharged from the diluted solution generating section;

a group of liquid duct having a predetermined diameter, the group of liquid duct being equipped in the perpendicular direction within the respective combustion chamber, the diluted solution flowing therein;

15 a duct wall (58-3) forming a wall of the combustion chamber, the diluted solution flowing on the duct wall;

a group of liquid ducts (58-1, 58-2) equipped in the perpendicular direction within the combustion chambers (57-1, 57-2), the diluted solution flowing therein;

20 a vapor discharging section (59) discharging the water vapor evaporated from the diluted solution into the diluted solution generating section, the diluted solution flown within the group of liquid duct and on the duct wall being heated by the flame; and

25 an intermediate solution discharging section (56A) discharging the intermediate solution generated by evaporating the water vapor

from the diluted solution into the diluted solution generating section.

8. The absorption chiller-heater according to claim 7, wherein the vapor discharging section (59) further includes an eliminator (59-1) having an angled shape for preventing the diluted solution from erupting and discharging toward the outside.

9. The absorption chiller-heater according to claim 7, wherein the plurality of distribution chambers further include a first branch pipe (53-1) equipped in the outside, the first branch pipe being connected with a mixing gas chamber generating the mixing gas; and a plurality of second branch pipes (53-2, 53-3) connected to the other end of the first branch pipe connected to the mixing gas chamber.

10. The absorption chiller-heater according to claim 9, wherein the second branch pipe includes a plurality of first valves for independently controlling an amount of the mixing gas flowing from the mixing gas chamber to the distribution chamber.

11. The absorption chiller-heater according to claim 10, wherein the first branch pipe further includes a second valve for controlling an amount of the mixing gas flowing from the mixing gas chamber to the second branch pipe.

12. The absorption chiller-heater according to claim 7, wherein the

respective combustion plate is overlapped plurally.

13. The absorption chiller-heater according to claim 7, wherein the intermediate solution generating section further includes a mixing gas  
5 chamber generating the mixing gas.

14. The absorption chiller-heater according to claim 7, wherein the chiller-heater further includes a low temperature heat exchanger (30) receiving the diluted solution discharged from the diluted solution generating  
10 section (20) and the concentrated solution discharged from the concentrated solution generating section (10), and discharging heat after exchanging a thermal energy of the diluted solution with a thermal energy of the concentrated solution.

15. The absorption chiller-heater according to claim 14, wherein the chiller-heater further includes a high temperature heat exchanger (40) receiving the diluted solution passed through the low temperature heat  
15 exchanger and the intermediate solution discharged from the high temperature desorber, and discharging heat after exchanging a thermal energy of the diluted solution with a thermal energy of the intermediate  
20 solution.

16. The absorption chiller-heater according to claim 7, wherein the chiller-heater further includes a high temperature heat exchanger (40)  
25 receiving the diluted solution passed through the low temperature heat

exchanger and the intermediate solution discharged from the high temperature desorber, and discharging heat after exchanging a thermal energy of the diluted solution with a thermal energy of the intermediate solution.

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